

JPRS 72241

15 November 1978

WORLD EPIDEMIOLOGY REVIEW

No. 114

DISTRIBUTION STATEMENT A

Approved for public release;  
Distribution Unlimited

19980707 266

U. S. JOINT PUBLICATIONS RESEARCH SERVICE

DTIC QUALITY INSPECTED 8

WORLD

WIDE

#### NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

#### PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22151. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available through Bell & Howell, Old Mansfield Road, Wooster, Ohio, 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

<b>BIBLIOGRAPHIC DATA SHEET</b>	1. Report No. <b>JPRS 72241</b>	2.	3. Recipient's Accession No.
4. Title and Subtitle <b>WORLD EPIDEMIOLOGY REVIEW, No. 114</b>		5. Report Date <b>15 November 1978</b>	
7. Author(s)		6.	
9. Performing Organization Name and Address <b>Joint Publications Research Service 1000 North Glebe Road Arlington, Virginia 22201</b>		8. Performing Organization Rept. No.	
		10. Project/Task/Work Unit No.	
		11. Contract/Grant No.	
12. Sponsoring Organization Name and Address  <b>As above</b>		13. Type of Report & Period Covered	
		14.	
15. Supplementary Notes			
16. Abstracts  The report contains worldwide press and radio coverage of incidence, outbreak, and other aspects of human, animal, and plant diseases, insect pests and control, sanitation conditions, immunization and public health programs.			
17. Key Words and Document Analysis. 17a. Descriptors  Worldwide Clinical Medicine Environmental Biology Hygiene and Sanitation Microbiology			
17b. Identifiers/Open-Ended Terms			
17c. COSATI Field/Group 2E, 6E, 6F, 6I, 6M			
18. Availability Statement <b>Unlimited Availability Sold by NTIS Springfield, Virginia 22151</b>		19. Security Class (This Report) <b>UNCLASSIFIED</b>	21. No. of Pages <b>55</b>
		20. Security Class (This Page) <b>UNCLASSIFIED</b>	22. Price

15 November 1978

## WORLD EPIDEMIOLOGY REVIEW

No. 114

## CONTENTS

PAGE

## HUMAN DISEASES

## INTER-AFRICAN AFFAIRS

- Cholera Statistics, Aid for Zaire, Rwanda, Burundi  
(WEST AFRICA, 23 Oct 78) ..... 1

- OMVS Dams Could Bring New Diseases  
(WEST AFRICA, 23 Oct 78) ..... 2

## ANGOLA

- Polio Vaccination Campaign To Open  
(JORNAL DE ANGOLA, 11 Oct 78) ..... 3

## ARGENTINA

- Briefs  
Young Rabies Victim ..... 5  
Latest Rabies Victim Dies ..... 5

## BOLIVIA

- Endemic Goiter Affects Over Two Million Citizens  
(PRESENCIA, 6 Oct 78) ..... 6

## BRAZIL

- Briefs  
Meningitis Outbreak Continues ..... 8

## DOMINICAN REPUBLIC

- Polio Epidemic 'Worst' in Nation's History  
(Ruddy L. Gonzalez; EL CARIBE, 10 Oct 78) ..... 9

CONTENTS (Continued)	Page
EGYPT	
Malnutrition Said Easily Treated if Caught Early (Suhayr 'Abd-al-Sittar; AL-JUMHURIYAH, 11 Sep 78) ...	13
New Institute Established for Bilharziasis Research (Samirah Ghabriyal; AL-AHRAM, 12 Sep 78) .....	16
Briefs	
Anticholera Immunization	19
INDIA	
Briefs	
Encephalitis Death Toll Mounts	20
Encephalitis Death	20
Treatment of Encephalitis	20
MALAYSIA	
Sharp Increase in Malaria Cases in Sabah (BORNEO BULLETIN, 30 Sep 78) .....	21
Briefs	
Kota Baharu Cholera Cases	22
NEW ZEALAND	
Typhoid Anchors Korean Fishing Boat (THE EVENING POST, 9 Oct 78) .....	23
RHODESIA	
Measles Inoculation Hindered by Political Intimidation (Editorial; THE HERALD, 30 Oct 78) .....	24
SAUDI ARABIA	
Cases of Cholera Still Reported in East (ARAB NEWS, 8 Oct 78) .....	25
SINGAPORE	
Briefs	
Dengue Fever Increase	26

CONTENTS (Continued)	Page
SOUTH AFRICA	
Resistant Pneumonia Bacteria Cause Concern (Marais Malan; THE STAR, 23 Oct 78) .....	27
THAILAND	
Briefs	
Cholera in Chiang Mai	29
ZAIRE	
Briefs	
Cholera Epidemic Could Spread	30
Cholera, Meningitis Epidemics	30
ZAMBIA	
Briefs	
Mbala District Cholera Outbreak	31
Cholera Deaths in Mbala	31
ANIMAL DISEASES	
ARGENTINA	
Rigid Measures Adopted To Combat Chagas' Disease (LA NACION, 8 Oct 78) .....	32
Rabies Fatality Reported in Buenos Aires Area (CLARIN, 28 Sep 78) .....	33
Briefs	
Antirabies Campaign	35
Rabies Situation	35
Dog Sales	35
KENYA	
Briefs	
Foot-and-Mouth Control Measures	36
MOZAMBIQUE	
Details Given on Foot-and-Mouth Disease Propagation (NOTICIAS, 11 Oct 78) .....	37

CONTENTS (Continued)	Page
RHODESIA	
Tick Disease Seen as Big Threat to Cattle (Phillippe Berlyin; THE HERALD, 3 Nov 78) .....	40
Urgent Steps Taken To Halt Snail Infestation (THE HERALD, 2 Nov 78) .....	42
SOUTH AFRICA	
Briefs	
Foot-and-Mouth Threat	43
VIETNAM	
Long An Acts To Protect Its Animals During Flood Season (NHAN DAN, 2 Oct 78) .....	44
PLANT DISEASES AND INSECT PESTS	
INTER-AFRICAN AFFAIRS	
Destruction Wrought by Insects, Rodents (Abdoulaye Sidibe; L'ESSOR, 17, 18 Aug 78) .....	45
JAMAICA	
Briefs	
Sugar Cane Rust Growing	48
NIGERIA	
Spittle-Bag Insects, Fungus Damage Crops in Gongola State (Ibrahim N. Salihu; NEW NIGERIAN, 19 Oct 78) .....	49
POLAND	
Briefs	
Potato Diseases Reported	50
SUDAN	
Briefs	
Locust Threat	51
Antinovs To Fight Pests	51

CHOLERA STATISTICS, AID FOR ZAIRE, RWANDA, BURUNDI

London WEST AFRICA in English 23 Oct 78 p 2117

[Text]

At least 20,000 people are believed to have been stricken with cholera in a vast area of Central Africa encompassing parts of Rwanda, Zaire and Burundi, experts at the Belgian Ministry of Cooperation and Development have said in Brussels.

The epidemic broke out in February, the experts here said. By September 21 Burundi had officially reported 4,768 cases, of whom 160 had died.

In Zaire there had been 400 deaths and thousands of people were stricken down in August in the single area of Uvira on the north of Lake Tanganyika. That same month 1,012 cases were reported in the area around Bukavu and 71 of these had died from the disease. At Goma, in the north of the Kivu area of Zaire, more than 1,100 cases were reported by the end of August and about 100 people were said to have died in medical centres.

Rwanda, the least-hit of the three countries involved, had reported some 300 cases by the end of September.

Western ambassadors in the region had met and formulated plans for emergency aid to be sent to the area. The Belgian Ministry pointed out that the figures only referred to cholera cases being treated in med-

ical centres and took no account of probably hundreds more in areas far from the region's urban centres. Reports from Nairobi said that many of the Zairese victims were being ferried across Lake Tanganyika in dug-out canoes to Bujumbura, where the most modern hospitals in the area existed. Many other people had been left abandoned on the lake beaches near the Burundi capital, apparently in the hope that they would be found by the local authorities and given treatment, the Nairobi reports said.

Since the outbreak began, the Ministry has said, Belgium had provided 3m. Belgian francs (about £50,600) for medical aid to the area. However, it had not been until September 25 that Belgium had received an official request from Zaire for coordination of this medical aid on the ground.

Zaire promised at the end of last month to send an official report to Brussels, but this report had not yet arrived, the Ministry said. In the meantime the Belgian Ministry had gathered its information from Belgian nationals living in Zaire. World Health Organization figures have generally been lower than those quoted by the Belgian Ministry.



## INTER-AFRICAN AFFAIRS

### OMVS DAMS COULD BRING NEW DISEASES

London WEST AFRICA in English 23 Oct 78 p 2083-84

/Excerpts/ A correspondent suggests that insufficient research has gone into the social and economic consequences of the OMVS projects. Over 150 years ago visitors had already noted the agricultural potential of the Senegal River basin. In spite of unfavourable climatic conditions, the area is blessed with a flat landscape and fertile soil which could be developed through the availability of irrigation water from the Senegal River. Two dams under construction, at Manantali in Mali, and Diama in Senegal, will enable the flow of the river, which rises in Guinea, passing through western Mali and serving as an 800-kilometre frontier between Senegal and Mauritania up to the Atlantic, to be controlled to irrigate an estimated 430,000 hectares of land, to provide electricity and to render the river navigable for the landlocked Mali. While the greatest emphasis is being placed by observers on the agricultural development of the area, the eagerness of the governments of the Senegal, Mauritania and Mali, the member states of the Organisation pour la Mise en Valeur du Fleuve Senegal, to have the dams built as soon as possible has left many local critics questioning whether the governments have taken stock of the immense consequences of the programme.

The fear of new diseases spreading as a result of the change in environmental conditions is regarded as another element requiring further research. Sleeping sickness or malaria are only two examples.

Finally, this is a project which will require close political co-ordination and foresight between the governments of Mali, Senegal and Mauritania. In the rush to build the dams, not enough attention has been paid to possible long-term problems. These have to be settled otherwise procrastination may lead to national interests jeopardising the immense potential of the projects.

CSO: 5400

ANGOLA

POLIO VACCINATION CAMPAIGN TO OPEN

Luanda JORNAL DE ANGOLA in Portuguese 11 Oct 78 p 1

[Excerpts] As was announced to the press by Minister of Health Coelho da Cruz and reported in our newspaper yesterday, the second vaccination campaign against infantile paralysis will begin on 19 November. This giant offensive in the health field will cover the entire country.

This vaccination campaign against poliomyelitis follows the one carried out last year, in which about 1.3 million children under the age of 10 were vaccinated, and the same pattern will be followed--that is, it will be done in two stages corresponding to the two doses that are necessary. The first stage will begin this 19 November, with the second following on 14 January 1979.

As is known, infantile paralysis is a terrible disease that claimed hundreds of Angolan victims, especially children, during the long colonial night. Many of them died as a consequence, and thousands remain injured or disabled for life.

Currently, and despite the success of the first vaccination campaign last year, cases of poliomyelitis are still appearing in our country, and this makes it necessary to administer the vaccine as a way of protecting our children from the effects of that dangerous disease.

The oral antipoliomyelitis vaccine (Sabin) that will be used in this second campaign--it was also used in the first--is prepared in the form of candy (Chumakiv) and contains attenuated live virus. Its effectiveness is proven, since it has been used to eradicate the disease in many countries. It is the well-known "candy vaccine" with which most Angolan children are already familiar.

This vaccine is trivalent (since it is a combination of the three types of polio virus), and the "candy vaccine" remains active for a week at ambient temperature.

### Preponderant Factors in Campaign

The goal in this vaccination campaign is to immunize at least 80 percent of the children under the age of 10 living in the most heavily populated centers of Angola's 17 provinces. To a large extent, its success will depend on the figures obtained through the census of the child population that will be taken beforehand by the OMA [Organization of Angolan Women] and other mass organizations.

This vaccination campaign will also require the unconditional support and cooperation of the parents and relatives of the children of vaccination age.

11798

CSO: 5400

## ARGENTINA

### BRIEFS

YOUNG RABIES VICTIM--A two-year-old girl was bitten by a rabid dog and is in critical condition in the Muniz Hospital. The new rabies case became known 10 days after the death of Norma Linda Martinez, 12 years of age, who was infected in Temperley and died in Muniz Hospital. Yesterday Buenos Aires authorities reported that the girl, Silvina Acosta, resident of the Santa Rita quarter of Boulogne, district of San Isidro, was bitten about 25 days ago by a rabid dog. The animal died on 5 September. The girl was apparently unable to communicate to her parents that she had been attacked by the dog and they were not aware that she was in serious danger. For this reason Silvina was not given medical attention and consequently did not undergo the essential antirabies treatment. When the symptoms of this serious disease manifested themselves she was taken to Muniz Hospital where according to reports she is in critical condition. Responsibility: "This new and painful experience highlights the need, which has been repeatedly explained, that dog owners comply strictly with antirabies vaccination of the animals, which must be repeated annually," a new warning by the Ministry of Social Welfare states. Also, it continues, the animals should not be "let loose in public places for any reason or under any circumstances." It was emphasized that these cases occur only because there are still irresponsible people who do not comply with these two requirements. In the meantime, in the present campaign more than 250,000 dogs have been vaccinated. With full public cooperation it is planned to vaccinate 1.5 million animals. [Text] [Buenos Aires CLARIN in Spanish 5 Oct 78 p 26] 9204

LATEST RABIES VICTIM DIES--La Plata, Buenos Aires--The Ministry of Social Welfare has reported another case of human rabies in the province. It states that the victim is Silvina Acosta, 2 years old, resident of the Santa Rita quarter of Boulogne, district of San Isidro. It also indicates that the little girl had been bitten about 25 days ago by a rabid dog with an owner, and had not been given any medical care. [Text] [Buenos Aires LA PRENSA in Spanish 5 Oct 78 p 3-3a] 9204

## BOLIVIA

### ENDEMIC GOITER AFFECTS OVER TWO MILLION CITIZENS

La Paz PRESENCIA in Spanish 6 Oct 78 p 8

More than 2 million persons suffer from endemic goiter and a little over 400,000 children under 6 years of age show signs of protein and caloric undernourishment.

These two statements were made by Dr Giovanni Daza, an official of the Social Security and Public Health Ministry, in addressing a course on Planning and Administration of Food and Nutrition Programs being given at the Higher Institute of Public Administration.

Daza made reference to the characteristics of the most frequently encountered nutritional diseases in Bolivia. In order of importance, he indicated that among these was endemic goiter, caused by a lack of iodine in the thyroid gland, and that 40 percent of the Bolivian population (1,920,000 inhabitants) was affected by it. He said that the disease lowers the working capacity (physical and mental yield) of the individual and weakens the learning ability of students.

He added that endemic goiter involves certain very dangerous features, such as, for instance, that approximately 10 percent of those suffering from it also suffer from cretinism.

Another of the very common ills in the country is protein and caloric undernourishment which, according to Dr Daza, affects 42 percent of children under 6. This implies, in other words, that there are some 420,000 cases of malnutrition.

In the speaker's opinion, this has led to the deterioration of their physical and mental development, to a weakened potential for growth and an unsatisfactory intellectual level. "All this," he affirmed, "represents, as a social consequence, a grave blow to the human resources which play a role in the productive process, a process that at the present time is showing a low yield."

Dr Daza also cited dermatitis or Pellagra. He noted that the disease, affecting 38 percent of the school age population, is serious because its

effects are very often not recognized. It is characteristic of the popular masses where it is known as "facial scaling" and appears as a hyper-pigmentation and scaling of the skin in areas which are frequently exposed to sunlight.

In the case of this form of skin disease, the niacin shortage is at the root of the trouble. Niacin is found in meat and the disease is attributable to the fact that a substantial percentage of the population eats no meat or else consumes it only in negligible quantities.

Dr Giovanni Daza concluded his lecture by pointing out that these diseases are generally encountered in the poorer sections of the population residing in marginal urban areas and in the rural zones.

7129

CSO: 5400

## BRAZIL

### BRIEFS

MENINGITIS OUTBREAK CONTINUES--Rio de Janeiro, 4 Nov (APF)--It was reported today that five more cases of meningitis were reported during the past 24 hours. A total of 13 persons have now been affected in this city by this illness since the beginning of November. The Rio de Janeiro State Health Secretariat also indicated that there were 290 cases of meningitis during October, including 35 deaths, and 20 were of the meningococcus strain. During the first 10 months of 1978 there have been 902 cases of meningitis in Rio de Janeiro. The virus responsible for this escalation has not yet been identified. Of the 902 cases, 215 resulted in deaths. [Text] [Paris AFP in Spanish 1703 GMT 4 Nov 78 PY]

CSO: 5400

DOMINICAN REPUBLIC

POLIO EPIDEMIC 'WORST' IN NATION'S HISTORY

Santo Domingo EL CARIBE in Spanish 10 Oct 78 p 1

[Article by Ruddy L. Gonzalez]

[Text] According to statements made yesterday by the director of Professional Services of the Rehabilitation Center, the outbreak of infantile paralysis that was discovered a few weeks ago and from which 67 children are now suffering "is the worst" that has ever struck the younger Dominican population.

Dr Alfredo Contreras said that in his opinion, the vaccination campaign waged to date by health authorities "has had some defects" and has been the reason why the disease has not been eliminated from the country once and for all.

"The outbreak of polio that has now struck the nation's children is the worst ever recorded in the country and it is highly irregular because it has not followed the cycle," Dr Contreras said.

He indicated that the months during which polio commonly affects the younger population of the Dominican Republic are February, March and April and "that is why I say that it is highly irregular. We have undertaken a series of studies in order to determine the reasons why September has experienced an outbreak of infantile paralysis with such a high incidence of children affected."

He said that to date, the Rehabilitation Center has received 31 cases of polio since the beginning of September and warned that "all citizens must be on the alert to the vaccination plans of the Office of Secretary of Public Health."

Dr Contreras issued the warning during a press conference held at the Rehabilitation Center. Participating in the conference were Mrs Mary de Marranzini, director of the Dominican Rehabilitation Association, and Arturo Perez, director of the center.

Dr Contreras said that "until vaccination is obligatory, even if we have to pass a law to make it so, we shall not be able to eliminate the disease from the country once and for all."



He said that the Dominican Republic has spent "much more money than other nations where polio has been completely eradicated."

He pointed out that there have apparently been "defects" in the vaccination campaigns waged previous to the time when dozens of children were struck with the disease.

"The recommended polio vaccination plan would be to go house to house, since the lack of education of mothers in the country's poorest areas means that the disease is wreaking havoc," he said.

"An immediate, systematic campaign reaching every home is recommended," he said.

Perez stated that "in addition to the regular annual vaccination campaign, there should be control throughout the country requiring vaccination certificates in schools and churches, even when a child is to be baptized or take his first communion," he said.

Mrs Marranzini said that "the Office of Secretary of Public Health must carry out a national information plan on polio, its effects and the vaccination programs through the principal communications media. In addition, we must educate mothers when their children are born about when their children must be vaccinated for polio. We must tell them how dangerous the disease is so that they will be afraid of it and see that their children are vaccinated."

The Rehabilitation Center issued a bulletin in which it states that "given the current situation, we recommend that every child under the age of 5 years be vaccinated and that every child with a fever accompanied by the symptoms of flu, diarrhea, vomiting, sore throat or muscular pain, be seen by a doctor."

It says that the only time when the vaccination is not recommended is when there is fever, vomiting and diarrhea. It adds that "the flu, when not accompanied by fever, does not mean that a child cannot be vaccinated."

"In general, it is desirable for parents to maintain sanitary and hygienic conditions that will help prevent the disease. Children should be kept clean, be bathed daily and have a proper diet and their parents should watch for the symptoms described," the bulletin states.

The Rehabilitation Center's publication adds that "infantile paralysis is an acute infectious disease caused by a virus, of which there are three types. It produces fever for several days and can appear to be nothing more than the flu or a gastrointestinal ailment with diarrhea.

"In most cases, the disease has no aftereffects, but in a very small percentage, we see paralytic polio, which are the cases which reach the Rehabilitation Center, hospitals and clinics," the bulletin adds.

It goes on to say that "the paralytic phase of the disease occurs on the third or fourth day following the onset of fever. The symptoms are muscular

weakness and pain in the extremities affected, generally the legs, but these symptoms can also occur in the arms, trunk and neck."

There also exists "bulbar polio in which patients can have respiratory problems leading to fatal consequences in most cases."

The Rehabilitation Center indicates that "there is no medicine that can cure polio. Its treatment is symptomatic -- that is, it consists of controlling the fever and providing proper positions in order to prevent contractions of muscles and major deformations."

It states that any child can be affected by the paralytic phase of polio and that lesions last for life. Although the disease also attacks adults, it more frequently occurs between the ages of 3 months and 5 years.

"No child stricken with polio must remain at home," the Rehabilitation Center indicates.

It states that "during the feverish stage, the child should be isolated by being placed in a hospital or being taken to the Rehabilitation Center. Care of children with polio should be in the hands of professionally trained personnel and technicians who will ensure optimum conditions during the acute phase of the disease so as to facilitate the long phase and treatment that follow.

"The Dominican Rehabilitation Association, Inc. urges parents to have their children vaccinated for infantile paralysis and considers that prevention is the only way to confront the already high and growing incidence of cases occurring during this crisis," the bulletin says.

It indicates that the age of children stricken during this outbreak is under 2 years and the cases are found throughout the country. They come from extremely low income groups and reside in rural, suburban and poor districts where poverty, promiscuity and ignorance prevail."

Finally, the Rehabilitation Center bulletin says that "the Dominican Rehabilitation Association urges pediatricians and hospitals to refer any cases of polio found to the Rehabilitation Center and adds that the group of doctors at the institution are the best able to make the best diagnosis, evaluation and treatment of cases."

In addition, the number of cases of polio affecting children under the age of 3 is now 67, according to statements made yesterday by the director of programs of the Office of Secretary of Public Health.

Dr Jose Ramon Oviedo said that the most recent cases of polio have been found in the sectors of Herrera and Capotillo in the capital and in Nagua and Samana provinces.

The last four cases of polio were detected over the weekend. Nevertheless, Dr Oviedo believes that the situation is not alarming and said that the vaccination process is continuing.

He said that many mothers are taking their children to be vaccinated the first time and do not return for the remaining doses.

He added that there is little vaccine and that it must be used in areas most highly affected.

According to Dr Oviedo, 33 percent of the cases were found in the capital.

Areas where the vaccination campaign has been waged include Los Minas, Mendoza, Mandinga, Villa Faro, Villa Duarte, Herrera, La Cienega and the entire area between the Juan Pablo Duarte Bridge and Francisco del Rosario Sanchez.

In addition, the Dominican Falcombridge Company Cooperative (COFALCONDO), together with Bonao health authorities, announced yesterday that a massive polio vaccination campaign is to be carried out in that city from 18 to 22 October.

11,464

CSO: 5400

## EGYPT

### MALNUTRITION SAID EASILY TREATED IF CAUGHT EARLY

Cairo AL-JUMHURIYAH in Arabic 11 Sep 78 p 9

[Article by Suhayr 'Abd-al-Sittar: "A Serious Illness Which Is Easily Treated"]

[Text] More than 50 percent of infant deaths during the first year of life are caused by malnutrition, more than 61 percent of Egyptian children are affected by malnutrition, and more than 80 percent by nutritional anemia. What specialized agencies are needed and how could the problem reach such a magnitude given the presence of many agencies for childcare, the Egyptian Society for Nutrition, the Nutrition Institute and then the recently created childcare committee.

Pediatricians unanimously feel that the first year of life is the most important, since the infant is exposed to injury through malnutrition. This was clear in the proportion of persons frequenting the Abu al-Rish university hospital for children.

In the hospital's outpatient clinic we tried to learn about malnutrition from the mothers of some of the afflicted children.

Fatimah Abu Gharib, a peasant woman from Batras in Imbabah and a mother of two, and whose infant is 1 year old, said: "His basic nourishment is only mother's milk. They told me that his treatment would require bringing him more than once."

Na'imah Mabruk says: "My daughter is a year and 4 months old. The doctor told me that she is a victim of malnutrition from too many starches. Her basic nourishment is mother's milk, boiled rice, and at times cooked broad beans."

She went on to say: "They told me to give her chicken breast or sour cheese, and they gave me a bottle of vitamins."

Hasan 'Ali Kahraba'i said: "My son is a year and 5 months old. I found his head was bigger than his body, and growing. However, the doctor said that he is a victim of malnutrition and should be treated with nourishment."

#### Following the Growth of the Infant

Dr Safwat Shakir, professor of infant nutrition and deputy director of the Abu al-Rish university hospital, puts the dots on the i's, saying: Although malnutrition diseases are serious for children, they can be treated, particularly in their early stages, if there is alert machinery keeping an eye on the growth of children so that it can discover the cases early, treat the children, and restore them to their normal state. If the children are left untreated, there may be serious effects, not only in physical development but in mental development, the effects of which show up in school age and adulthood.

Dr Safwat concludes that there are two course of malnutrition. First, the machinery for childcare is not of adequate size and does not perform the job with care, particularly the childcare centers. As for the second reason, it involves the lack of food and the multiplicity of diseases, particularly in the first year of the child's life, especially subjecting it to dysentery.

#### The Egyptian Society for Nutrition

The Egyptian Society for Nutrition was established 6 years ago, the idea for establishing it having come from Dr Isma'il Abduh who established the first institute for nutrition (now under the Ministry of Health). It includes all workers in the field of nutrition and persons interested in public health and the chemical aspects of malnutrition. However, the activity of this society, according to Dr Safwat Shakir, ends with research and the issuance of recommendations on spreading nutritional awareness. With regard to the responsibility for implementing the society's programs for combatting malnutrition, it falls on the Ministry of Health which combines the research of the society and the recommendations of the nutritional institute as well.

#### 90 Percent Are Victims of Anemia and Weak Blood

Dr 'Ali 'Abd-al-'Al, professor of pediatrics at the Cairo School of Medicine, affirms that 90 percent of our children are victims of weak blood (lack of iron). This shows up in the skin color which appears somewhat jaundiced. This is caused by the fact that iron is generally lacking in the diet of Egyptians. The second cause is that some mothers do not know about giving children a balanced diet.

Dr 'Ali 'Abd-al-'Al says that a large percentage of the children who are victims of malnutrition are often victims of childhood diseases in their first year of life, particularly urinary biharziasis. The lack of iron afflicts the child with anemia, the anemia weakens the digestive system and the child continually gets dysentery, leading to malnutrition.

## Symptoms of Malnutrition

Dr 'Ali 'Abd-al-'Al describes the condition of children who are victims of malnutrition, saying: The child's weight gradually begins to drop. This is followed by severe emaciation, fluctuation between temperature extremes increases, the child's skin becomes flaccid and he grows pale, becoming ashen or gray. Then wrinkles appear on the face and legs. It causes the muscles to become weak. Finally the child becomes apathetic and exhibits a deterioration of all vital signs.

He stresses that though the percentage of malnutrition appears high, it poses no threat to the health of the child if treated quickly and if the child is given vitamins and food containing iron. Things would be easier if the drug agencies could produce or import iron tablets to be given to children.

## What is the Solution?

If the treatment of malnutrition is simple if it is caught in its early stages, why haven't we made tangible progress in treating it?

Dr Safwat Shakir says: The childcare centers can do that if they are developed to where they can play their role in giving serious attention to following up child development and if each center is provided with a visiting [nurse] who will make successive visits to the child at home and who will make a record of all its health developments. Were we to do this, we could discover malnutrition and treat it early. Dr Safwat wonders why we don't teach nutrition as a subject in the secondary and preparatory schools.

## Natural Breastfeeding Is a Prevention

Dr 'Ali 'Abd-al-'Al stresses the importance of natural breastfeeding of the child, as it protects it from dysentery through the lactoflavin which weakens any microbe attacking the child's intestines, and it digests starches completely.

As for how to effect early discovery of child malnutrition, it would be accomplished through the child's health card which contains data on all the child's developments, doctor's observations, data on the mother and father, the condition of the child at birth and the symptoms it exhibits. The card was designed by Dr 'Ali 'Abd-al-'Al in conjunction with a group of pediatricians to make it easy for the treating physician to know everything about the child. That card could be distributed along with the child's birth certificate and filled out by the visiting nurse or doctor at the childcare center. This project, however, has not yet been implemented, though the cards have been printed and prepared.

If the child is a victim of malnutrition, it will be stunted mentally, and if it is discovered early, it only requires food and iron. Can we wipe out malnutrition during international children's year?

## EGYPT

### NEW INSTITUTE ESTABLISHED FOR BILHARZIASIS RESEARCH

Cairo AL-AHRAM in Arabic 12 Sep 78 p 6

[Article by Samirah Ghabriyal: "The Time Has Come for the Disappearance of Bilharzia Which Saps the Strength of the Peasants"]

[Text] The largest institute for bilharziasis research opened its doors this week in Cairo to offer its scientific and medical services to 71 countries where bilharzia, with all its dangers, is widespread.

The new scientific institute will begin its research where that of others left off: what is the real reason for the complications in bilharziasis?

Is the cause the presence of toxins resulting from the presence of dead larva in the human body? Is the cause viruses or bacteria which are conducive to the onset of complications? Will early treatment stop the occurrence of these diseases? Should the types of treatment change with the different environments? Does the body itself cause these complications to erupt? Then, how big is the problem in our country, what is the resulting deficit and how big are the costs arising from the days of the disease?

These questions, according to Dr 'Ali Zayn al-'Abidin, director of the Bilharzia Research Institute, need precise answers. The research which has been done on bilharziasis has not come up with the answer needed to find a speedy solution to halt the spread of bilharziasis and its complications. To accomplish this, the institute will first assemble all literature on bilharziasis in Egypt and throughout the world to find out what holes there are and to fill the gaps so as not to waste time in repeating research.

### 200 Million Cases

The fact is that the fluke is found in 71 countries, in the Middle East, Central America, Africa and the Near East. About 600 million people live in these areas, and it has been found that 200 million of them are afflicted with the disease.

It has been established that not recognizing the natural and real scope of the bilharziasis problem arises from the lack of effective means to ascertain the weakness and death resulting from being afflicted with bilharziasis. Scientific research shows that the presence of a small number of flukes in the body of a victim will not cause any symptoms of the disease to appear. The body can harbor these flukes for several years, up to 30 years in some cases, without showing any symptoms worth mentioning. However, the presence of large numbers of flukes will bring on the disease and its complications.

The symptoms of the disease change with the alteration of the forms of the fluke in the body.

They first cause symptoms of general susceptibility, such as a feeling of tiredness accompanied by an irregular rise in temperature, the appearance of some inflammation of the (artikaria) and an increase in the ratio of white bloodcells.

These symptoms disappear when the flukes are fully developed. When the female lays the eggs, another stage of the disease begins. The patient begins to complain of bloody urine or feces mixed with blood.

Some eggs cannot emerge from the body, and here the body surrounds them with specific types of cells, resulting in the death of the eggs in their places. These places become fibrous and these eggs calcify. This calcification may spread and envelop the mucous membranes of the bladder. Naturally these pathologic changes in the afflicted organs will upset their functions.

The circulation of the blood will carry some of the eggs to the liver, where they will be stopped. Some may succeed in getting through the refinery of the liver and reach the various organs of the body, such as the kidneys, the lungs and the nervous system. There the body will surround them with certain types of cells resulting in obvious changes in the functions of these organs. Also the presence of these eggs in the liver can lead to cirrhosis of the liver resulting in inflammation of the spleen and elevated blood pressure in the alimentary system and the appearance of varicose veins around the body and where the alimentary system comes in contact with the main circulatory system. These veins are the source of repeated hemorrhages that threaten the life of the patient.

#### The Treatment--Unknown Up to Now

So far, though there is a sizeable number of drugs effective against the bilharzia fluke, science has not yet come up with a real, ideal, 100 percent effective cure for bilharziasis.

One drug may be effective against one type of bilharzia fluke and not against another, which limits the suitability of such drugs in a comprehensive treatment of bilharziasis. There are cases where the patient is



the victim of two types of bilharzia flukes. It should also be noted that most of the medicines for bilharziasis cause side effects.

However, despite all the foregoing, the drugs against bilharziasis which are now in use, either alone or in conjunction with snail pesticides, have been able to reduce the spread of this disease.

As for the many attempts which have so far been made to prevent this disease, they have had no satisfactory results.

There is one view that holds that the bilharzia flukes surround themselves with antigens similar to the antigens of the real host and this prevents the body from countering and expelling them as foreign objects, and they can easily remain inside the host for long periods, in some cases up to 30 years.

The new institute cost 18 million marks in technical equipment and expertise, which came as a grant from West Germany. One objective of the institute is to engage in scientific, applied and field research to develop ways to combat bilharzia. A research plan will be developed on the national level to be discussed with the Egyptian-German consultative committee of the Theodor Bilharz Institute, which is headed by Dr 'Ali Zayn al-'Abidin, director of the institute.

The institute will collect and collate all the literature on bilharziasis research and conduct research on the average host of bilharzia by studying the snail's environment, the effect on them of various irrigation projects, the extent to which they are affected by various pesticides and the effect of such pesticides on the health of living creatures in that environment, particularly man.

Egyptians will be one subject of study in the new institute as a prime causative factor in making the disease endemic through the customs and traditions with which they coexist. The workers at the institute will strive to find ways to change these customs.

Customs such as bathing in the canals, urinating there and coming in contact with polluted water. What is needed is to disseminate health education along with starting a study of it with children, not as science courses alone; rather education on bilharziasis can be part of arithmetic questions, construction subjects, the geography course and other subjects which the small student studies. He will grow up aware of the ramifications of the problem of bilharziasis and convinced of the necessity of improving his environment as one of the factors which will halt the spread of the disease. Health education, in the view of Dr 'Ali Zayn al-'Abidin, must be at the popular level and also at the level of those who are interested in the problem; the imam at the village mosque, the teacher, the midwife, all these have a definite role in spreading health education in the village. This will be the downfall of a major factor in the spread of the threat of the bilharzia fluke.

EGYPT

BRIEFS

ANTICHOLERA IMMUNIZATION--A campaign will be launched today to immunize 4 million citizens in Cairo against cholera despite the fact that the city is clear of any cholera cases. People to be immunized include those working in government utilities such as Cairo International Airport, the health quarantine service and the police as well as those employed in public places. Some 25 million anti-cholera shots have been prepared and distributed to the various health centers and offices in order to begin the immunization. Health Minister Dr Mamduh Jabr yesterday visited the quarantine center in the port of Alexandria and gave strict instructions for the prevention of cholera from entering the country. He also inspected work at the Sidi Bishr hospital east of Alexandria. [Text] [Cairo Al-Ahram in Arabic 19 Oct 78 p 1 LD]

CSO: 5400

## INDIA

### BRIEFS

ENCEPHALITIS DEATH TOLL MOUNTS--In Uttar Pradesh, the virus encephalitis disease has spread to three more districts claiming a total of over 380 lives so far. The union minister of state for health has had talks with the state chief minister and senior officials of the health department on preventive measures in the affected areas. [Delhi Domestic Service in English 0240 GMT 29 Oct 78 BK]

ENCEPHALITIS DEATH--Death toll due to encephalitis in seven districts of Uttar Pradesh has gone up to 271. The highest number of 120 deaths is reported in Gorakhpur, while there are 91 in Deoria District. Varanasi District has also come under the grip of this disease. [Delhi Domestic Service in English 0830 GMT 27 Oct 78 BK]

TREATMENT OF ENCEPHALITIS--The Union Ministry of Health and Family Welfare has initiated a series of measures to help control the spread of Japanese encephalitis which is causing concern due to continued reports of deaths from Uttar Pradesh [U.P.]. Experts from the National Institute of Communicable Diseases in New Delhi and the National Virus Research Institute at Pune are already in eastern U.P. to make on-the-spot investigation of the nature of the disease. Seven districts of Uttar Pradesh are affected by this disease: Gorakhpur, Deoria, Basti, Ballia, Ghazipur, Azamgarh and Varanasi. According to the latest official information from U.P. there have been 1,119 cases and 268 deaths. The central government has sent 1,000 bottles of mannitol and 1,000 vials of decadron to eastern U.P. for use in treating the disease. These are the two medicines which are essential for its treatment. The U.P. Government has opened a number of treatment centres in all the affected districts. The control of the disease depends on the extermination of the mosquitoes which are the carriers of this virus and transmit the disease from animals to human beings. A programme of intensive spraying of B.H.C. and malathion has been taken up in all affected villages, and their surroundings are also being covered under this programme. Another important step has been taken by arranging for the import of anti-Japanese encephalitis vaccine through the good offices of the UNICEF and WHO. This vaccine is manufactured only in Japan and a substantial quantity has been arranged through the Indian Embassy in Tokyo. These supplies are expected to arrive in India in the next 2 days. [Delhi ISI in English 1452 GMT 27 Oct 78 BK]

## SHARP INCREASE IN MALARIA CASES IN SABAH

Kuala Belait BORNEO BULLETIN in English 30 Sep 78 pp 1, 4

[Text]

**KOTA KINABALU.** — After years in which it was kept in check, malaria has broken loose once more throughout much of Sabah.

Medical Department figures show an average of 45,000 cases a year for the past three years, out of a population of 900,000.

This contrasts with the 10,000 cases or so each year reported in the early 1970s, when a malaria eradication campaign launched in 1961 appeared to be within sight of success.

Before the campaign began the disease was estimated to affect about a quarter of the total population.

Today's toll is nothing like that, but it is serious enough for the Medical Department to be concentrating now on checking its spread rather than trying to wipe out the disease.

That the state's Malaria Eradication Programme has been renamed the Malaria Control Programme (MCP) is a sign of this change in emphasis.

That the MCP is the department's largest single project, with expenditure this year set at more than \$4 million, or nine percent of the department's total budget, is another sign of concern.

The money is spent mainly on DDT spraying, supplying chloroquine tablets and health education. The aim now is to bring the yearly average back down to 3000 or 4000 cases within ten years.

The part of Sabah hardest hit by the resurgence of the disease has been Keningau, about 60 miles from here, with 7000 cases last year.

A report by the state's Director of Medical Services in 1973 said the Keningau District had been free from malaria "for the past few years."

Sabah appears to be harder hit by the upsurge of the disease than other parts of the tropical world where malaria has once again become a primary health hazard.

The Far Eastern Economic Review this month reported that malaria in Pakistan, with many times Sabah's population, had reached "epidemic proportions." Its cases last year totalled 47,000 against Sabah's 45,000.

Peninsular Malaysia, with a much larger population than Sabah, had about 13,000 cases last year and Sarawak just over 1000.

(But in Sarawak there is also concern: Cases this year have already passed last year's total, with border areas in the Second, Fourth and Fifth Divisions particularly affected.)

There appears to be no single or simple explanation of the resurgence of malaria in Sabah, though the opening up of forest areas for agriculture may be a factor.

Mosquitoes can breed quickly in the jungle fringe — even the puddle formed by a buffalo's footprint permits this — and workers in the area become easy prey.

Shifting cultivators sleeping in sulaps, or temporary shelters, are also often affected.

Mr Peter Feeney, a United States Peace Corps worker with the Medical Department's health education section, says however that some human resistance may also be involved.

In particular, significant numbers of people have refused to let their houses be sprayed with DDT and to take anti-malaria drugs.

The answers to both these problems lie with health education, he says, and it would also be useful if people in malarial areas would use mosquito nets at night — the mosquito which carries malaria tends to bite late,

after 10 pm.

A cottage industry at Surusop, about 30 miles from here near Tuaran, is about to begin making mosquito nets which will be cheaper than imported ones.

Resistance to DDT spraying may be reduced by the use of a more expensive emulsion which does not stain walls. Like the one used earlier, it cannot cause harm to people or animals.

The Medical Department is also trying to persuade people to regard any fever as possibly malaria and to seek treatment for it — though some do not do so because they fear that being identified as a malaria case will mean having their houses sprayed again.

MALAYSIA

BRIEFS

KOTA BAHARU CHOLERA CASES--In Kota Baharu, Kelantan, six more cases of suspected cholera have been admitted to the general hospital. An information department statement said the number of suspected cases still receiving treatment at the hospital had risen to 15. [Text] [Kuala Lumpur Domestic Service in English 1130 GMT 27 Oct 78 BK]

CSO: 5400

TYPHOID ANCHORS KOREAN FISHING BOAT

Wellington THE EVENING POST in English 9 Oct 78 p 20

[Text] Christchurch, Oct 8 (PA).--A Korean fishing boat is in quarantine in Lyttelton Harbour with a confirmed outbreak of typhoid.

A crew member with suspected typhoid was able to discharge himself from Wellington Hospital last Wednesday and has now been placed in isolation in Christchurch Hospital with the disease confirmed.

The man, Mr Y Park, 36, left the hospital to rejoin his ship, Endeavourers No 7, before it left Wellington.

Hospital tests subsequently confirmed that Mr Park had typhoid and urgent radio messages directed the ship to Lyttelton for quarantine, where it arrived on Saturday morning.

The Koreans now claim that they were heading for Lyttelton anyway, not because other crew members were ill but for engine repairs.

Endeavourers No 7 is anchored under strict quarantine

regulations and will remain there until tests have been completed on about 30 crew members.

The Port Medical Officer, Dr J E Keithley, said the quarantine was purely a precautionary measure, "but we have one seaman with definite typhoid," he added.

"It was diagnosed in Wellington, where he was admitted with a stomach upset on September 26," said Dr Keithley.

"The hospital authorities decided to carry out some tests and in the course of these he took his own discharge last week.

"When the ship had left for sea the tests confirmed a positive typhoid."

The ship would probably stay in the present quarantine for about two to three days

or until it was cleared, said Dr Keithley.

It is understood that the first signs of the outbreak occurred three days after the vessel left Pusan, Korea, for New Zealand waters.

The tests have confirmed that Mr Park's infection was picked up in Korea before the ship sailed.

When Mr Park was taken to Christchurch Hospital on Saturday he was admitted symptom-free of typhoid, although he was a carrier of the disease.

While the Korean was able to discharge himself from Wellington Hospital the effective quarantine measures now imposed on the ship at anchor in Lyttelton will require a complete clear bill of health before the ship is allowed to leave.

RHODESIA

MEASLES INOCULATION HINDERED BY POLITICAL INTIMIDATION

Salisbury THE HERALD in English 30 Oct 78 p 8

[Editorial: "Children in Danger"]

[Text]

**POLITICAL INTIMIDATION** is reported to be one reason why Government health teams are having only limited success in their campaign to inoculate children in African townships and refugee camps against measles.

It is a deeply disturbing state of affairs, particularly as there is a growing danger of an epidemic.

In normal circumstances, measles is not a killer disease. But it can be among children who suffer from malnutrition. And with the influx of refugees, there must be many infants in this vulnerable condition around Salisbury.

It is bad enough that power-hungry nationalists have already deprived many African children of the chance of an education: it is monstrous that they should now try to deprive them of a better chance of life.

It is, of course, enormously difficult for the authorities to counteract intimidation of this nature. But they must keep trying.

Would it not be possible for some African members of the Government to add their weight to the inoculation campaign by touring the areas concerned and trying to allay the fears of the people?

CSO: 5400

CASES OF CHOLERA STILL REPORTED IN EAST

Jiddah ARAB NEWS in English 8 Oct 78 p 2

[Excerpts]

RIYADH, Oct. 7 (SPA) — The Ministry of Health Saturday confirmed that cases of cholera are still being identified in the Eastern Province.

But SPA quoted the ministry as saying that the general health situation in the province is satisfactory and the epidemic had not been allowed to spread to other areas.

Every effort is being made to check the spread of the disease, the ministry said and urged residents to take every precaution against it by observing personal cleanliness.

The ministry, in cooperation with the Ministry of Municipal and Rural Affairs and other government departments and individuals, has formed a local Environmental Health Com-

mittee in the province, a permanent operations room and epidemic eradication units.

**Full-time**

Outpatient clinics are working full-time, a spokesman for the ministry said.

Health reports have also been ordered on water sources and persons who have contact with food and who might be carriers of the disease.

Elsewhere, the ministry has given instruction to all entry points to check visitors from countries affected by cholera, while cholera prevention units have been despatched to the pilgrimage areas.

**New clinics**

The Saudi ministry announced Saturday it will commission 50 clinics in different parts of the Kingdom in the next six

months and five hospitals in Jizan, Medina, Jeddah, Hofuf and Al-Khobar early next year.

Dr. Abbas Qazzaz, director general for curative medicine at the ministry, said that work had also started on three hospitals in Tabuk, Hail and Najran.

The ministry is planning to set up a nursing school in Medina in cooperation with the Directorate of Women's Education, "Al-Medina" newspaper reported Saturday.

The ministry also announced a study program for general physicians who wish to obtain a diploma in psychiatry and neurology. It is to be supervised by a select team of medical experts from universities in Saudi Arabia, Egypt, Pakistan, Iran, Sudan and Europe.

CSO: 5400



## SINGAPORE

### BRIEFS

DENGUE FEVER INCREASE--The number of dengue hemorrhagic fever cases shot up from 58 in the first 9 months of last year to 324 in the same period this year. The epidemiological news bulletin, which releases the figures in its October issue, says that in one of the cases, a 21-year-old male labourer from Jurong died in August this year at Alexandra Hospital when he developed severe nose bleeding and went into irreversible shock. But the dengue outbreak was finally brought under control through intensified vector control measures. Since June 19 this year 90,844 premises were inspected, of which 2,053 or 2.3 percent, were found breeding aedes mosquitoes. The bulletin adds that 121,521 health education pamphlets were distributed and 92 summonses were served. No reasons for the rise in dengue cases are given. [Text] [Singapore THE STRAITS TIMES in English 6 Nov 78 p 9 BK]

CSO: 5400

RESISTANT PNEUMONIA BACTERIA CAUSE CONCERN

Johannesburg THE STAR in English 23 Oct 78 p 8

[Article by Marais Malan]

[Text]

The Two M's — malnutrition and measles, both preventable conditions — are believed to lie at the root of the disturbing development of multiresistant strains of pneumonia bacteria in South Africa which has evoked world-wide concern.

For so far, with one exception, these superbugs which have learnt to defy treatment with the most common, safest and cheapest antibiotics, are found in black children only.

And this is the group that is most prone to the two M's

These are the views of Professor Hendrik Koornhof, head of the Microbiology department at the South African Institute for Medical Research in Johannesburg and a world authority on his subject.

He has been in the forefront of the fight against the resistant pneumococci which unexpectedly appeared in Johannesburg and Durban hospitals last year.

By the end of 1977 the situation was under control.

Patients and carriers had been isolated and treated with the remaining antibiotics to which the organism was still sensitive and it was hoped that the strain had been eradicated.

## Struck

But in June this year resistant pneumococci again struck at Baragwanath Hospital in two patients and several carriers.

Fortunately the germs were resistant to two antibiotics only, but these were the most useful in these infections — penicillin and chloramphenicol (so-called PC resistance).

The patients recovered, but now more multiresistant carriers have been identified.

In Durban too, where previously only PC resistance has been encountered, a severe case of infection with multiresistant pneumococci has occurred.

Prof Koornhof is not optimistic about the long-term prospects.

"It is difficult to predict," he says.

"If we can eradicate the organism in all carriers the incidence of these infections should drop and eventually disappear.

"But I don't think we shall be able to do this and the problem will probably be with us for a very long time."

So far the resistant strains have been found in hospitals only where they are relatively easy to control through early recognition and adequate treatment with the correct antibiotics.

But it is already known that low-level penicillin resistance exists in population groups in various

parts of the world, including South Africa, and Prof Koornhof suspects these organisms will become more widespread and the level of resistance will increase in time.

And it is estimated that theoretically the bugs from each one of these carriers can spread to three out of every 100 contacts in such overcrowded conditions as exist in some Soweto homes, says his colleague, Dr Michael Jacobs who found the first multiresistant organism last year.

## Penicillin

White penicillin still remains the drug of choice in serious pneumococcus infections in the community.

The advice to doctors is to be alert to the possibility of resistance especially in hospital patients and to modify their treatment promptly when resistance is suspected so as not to promote its spread through the use of the wrong antibiotics.

But why is resistance so prevalent among black children and not whites? This is where we come to the two M's.

Prof Koornhof and his colleagues believe that answer is largely socio-economic.

The high black infant mortality rate is due almost entirely to infections — mainly measles and gastroenteritis — which are particularly virulent

in this group because of malnutrition and poor home conditions.

Thus young black children, because they are so vulnerable to infections, receive antibiotics on a large scale, much more so than their white counterparts.

Many normal people harbour pneumococci in their throats and a small number of these organisms may be mutants which are resistant to penicillin.

When such people are exposed to this antibiotic the resistant mutants will increase at the expense of the others, which are killed by the penicillin.

Thus, with widespread use of antibiotics more carriers will emerge and levels of resistance will increase.

The new vaccine against pneumococci will theoretically protect people against infection, but it does not work well in children under two years.

"So just as important as isolation and treatment is mass immunisation against measles and improved socio-economic conditions for blacks," says Prof Koornhof.

## Hygiene

"Much is being done in Soweto to alleviate malnutrition and to educate parents on hygiene and good baby feeding practices — things that give the children greater immunity against infections.

"But much more needs to be done and measles immunisation should be tackled more energetically if we are to remain in control of the situation."

Resistance is as old as antibiotic therapy itself and medical science has constantly been involved in a race between the discovery of new antibiotics and the development of resistance.

Notable examples in recent times are the penicillin resistant gonococci (cause of gonorrhoea) and the organism responsible for typhoid fever.

Will mankind eventually lose the race and succumb to his old arch-enemy of the pre-antibiotic era which was one of the greatest killers of all time?

## Future

"No completely new antibiotic has appeared for many years but a lot of work is being done to modify the existing ones," says Prof Koornhof.

"I think this is where our hope lies for the future.

"In the meantime we have to use the antibiotics we have with the greatest care and ensure that we always have some in reserve to deal with the resistant strains."

Prof Koornhof has just returned from an international conference on microbiology in Atlanta, Georgia, where he read a paper at a symposium on antibiotic resistance.

## THAILAND

### BRIEFS

CHOLERA IN CHIANG MAI--Chiang Mai--Cholera has hit two districts here where one man has died and many villagers have been hospitalized. A warning has been issued to residents in Amphoe Muang and Fang against the spreading of cholera. A massive anticholera vaccination campaign has been launched in the two districts. [Bangkok NATION REVIEW in English 29 Oct 78 p 1 BK]

CSO: 5400

## ZAIRE

### BRIEFS

CHOLERA EPIDEMIC COULD SPREAD--A cholera epidemic has killed hundreds of people in Eastern Zaire and is spreading rapidly, according to doctors working in the affected areas. There were no official casualty figures but they said the greatest number of deaths, estimated at between 500 and 1,000, occurred on the Ruzizi Plain in Kivu Province. Poor hygiene, lack of serum and antibiotics and transport difficulties have all contributed to the spread of the epidemic, they said. The Belgian Embassy spokesman in Kinshasa said that an international appeal has been made for serum in powder form, antibiotics, sulfa drugs, disinfectants and beds. The spokesman said that, if immediate action was not taken, the epidemic could spread throughout Zaire within months. [Text] [London WEST AFRICA in English 16 Oct 78 p 2069]

CHOLERA, MENINGITIS EPIDEMICS--Two cholera and meningitis epidemics have broken out in the Masisi and Uvira (Kivu) areas of Zaire. According to official information from these areas 500 vaccine doses have been sent over, which will be enough to vaccinate 2,500 persons. These vaccines are part of a larger amount of various medicines which were recently donated to the Republic of Zaire. [Text] [Luanda JORNAL DE ANGOLA in Portuguese 26 Oct 78 p 8]

CSO: 5400

## ZAMBIA

### BRIEFS

**MBALA DISTRICT CHOLERA OUTBREAK**--An outbreak of cholera has been reported at Chitwashiba and Kakoma villages, 45 km west of Mpulungu in Mbala district. Confirming the report yesterday the medical superintendent at Mbala general hospital, Dr Ragerera Maheshi said the disease has already claimed two lives and six people were seriously sick. Dr Maheshi who rushed to the area on Saturday said one man died at Chitwashiba and the other at Kakoma villages. He added that there was a possibility of more cases at Kabyolwe and Kapimba villages near Nyendwe valley. He however appealed to the public not to panic since medical staff were already manning the situation. Meanwhile Mbala district governor Mr Alfonso Musawa has banned businessmen from purchasing kapenta at Mpulungu.--ZANA [Text] [Lusaka ZAMBIA DAILY MAIL in English 23 Oct 78 p 3]

**CHOLERA DEATHS IN MBALA**--Lusaka.--Seventeen people have died and 82 are seriously ill as a result of cholera in Mbala on the border with Tanzania, the Zambian director of medical services, Dr Joseph Kasonde, said here yesterday. He said the World Health Organization had given Zambia 100,000 doses of vaccine to help fight the disease and a further 22 medical personnel had been rushed to Mbala to strengthen the anti-cholera team already there.--IANA [Text] [Salisbury THE HERALD in English 2 Nov 78 p 1]

CSO: 4420

ARGENTINA

RIGID MEASURES ADOPTED TO COMBAT CHAGAS' DISEASE

Buenos Aires LA NACION in Spanish 8 Oct 78 p 12

[Text] San Salvador de Jujuy--Chagas' disease constitutes a major problem in Jujuy since 3 out of every 10 inhabitants of Jujuy are infected with the disease.

To eradicate the disease or, for the present, to decrease its high incidence, the province is developing through the Public Health Subsecretariat a strict province-wide program of control of the disease, which was approved last December.

Objectives and Goals

The program involves a series of activities of integrated medical care and of education to permit the maximum use of all the available resources and to create others to achieve the proposed objectives and goals.

The specific activities of the program which have been carried out during this year are: a study of the magnitude of the problem in the critical areas in terms of clinical, serological, electrocardiographic and radiological resources; training of the personnel of the Public Health team, refresher courses for doctors and biochemists, a course for technical personnel; public health nurses and instructors and short training courses for public health agents, the establishment and outfitting of diagnostic laboratories, provisions having been made for the setting up of three referral laboratories for Chagas' disease in Buenos Aires, San Pedro de Jujuy and La Quiaca; the staffing of clinics with qualified professionals in all the provincial hospitals and the adoption of standards for diagnosis and treatment of Chagas' disease patients.

The specific activities of the provincial program are complemented by the actions taken by the national government to eliminate the kissing bug [Conenose], the vector which transmits this parasitosis.

9204

CSO: 5400

ARGENTINA

RABIES FATALITY REPORTED IN BUENOS AIRES AREA

Buenos Aires CLARIN in Spanish 28 Sep 78 p 24

[Text] A 12-year-old girl, presumed to have been bitten by a dog 8 months ago, died of rabies on Thursday.

A doctor from the Rabies Prevention Center in Avellaneda went to Temperley to investigate the cause of the death. According to statements made yesterday to CLARIN by the chief of the center, Dr Juan Carlos Arrossi, it is not possible to determine the exact cause of death although two possibilities are being considered.

One of them is that there was a bite from the animal; the other was that the girl had several superficial wounds in the skin and that the hydrophobic saliva entered through one of them.

The Incident

Norma Lidia Martinez, the deceased girl, lived at 244 Perito Moreno, Temperley, with her parents and siblings. She attended Provincial School No 40 and was extraordinarily fond of animals. She not only loved the dogs she knew but also unthinkingly petted stray dogs.

In January, while the schools were closed, a mad dog that had come into repeated contact with Norma Linda was known to have died.

It is suspected that during that month the incident took place which led to death 8 months later. It evidently was an unimportant event for her as well as for her parents.

In any event, the incubation of the fatal disease started in January. Rabies is caused by a virus that attacks, basically, the central nervous system of animals or people. It reaches the brain through the nerves leading from the area of the bite or the infecting contact.

If antirabies treatment is not started, once the disease manifests itself it is always fatal because the destruction of the nerve cells it causes is irreversible.



Norma Linda was not given immediate medical treatment. The wound, perhaps a minor scratch, disappeared after a few days, but the virus started its advance toward the brain. Early last week she began to have some symptoms that were characterized as nonspecific changes.

On Wednesday, when the symptoms became more pronounced, the girl was hospitalized in a facility in Lanus, where one of the diagnoses was confirmed. She was immediately transferred to the Muniz Hospital.

#### Doubt

Dr Arrossi commented that in this case "there is substantial doubt as to the origin of the disease. If there was a bite, the girl did not realize it or considered it unimportant. It is also possible that in the normal course of play she received slight wounds that were not important but that broke the skin. The virus could have entered the body through a cut."

#### Recommendations

Dr Arrossi stressed two basic points, at this time when the authorities have made available 300 stations to combat rabies. In the first place, dogs should not be left on the streets. In second place, they should be vaccinated. The specialist commented that by means of these two steps rabies will be eradicated. One way or another, those responsible for the rabies and for the fatalities are those who abandon dogs and who do not immunize them with the vaccine.

#### Communique

Last night the Ministry of Social Welfare of Buenos Aires released a communique giving details of the incident and issuing a warning so as to intensify public awareness of the constant need of vaccinating the animals starting at the age of 3 months. In addition they must be revaccinated every year.

9204

CSO: 5400

## ARGENTINA

### BRIEFS

ANTIRABIES CAMPAIGN--For 2 months beginning last Saturday the city of Buenos Aires will conduct an antirabies vaccination campaign which will be supported by a simultaneous prevention campaign in the districts of Vincente Lopez, San Martin, Tres de Febrero, La Matanza, Lomas de Zamora, Lanus and Avellaneda. For this purpose 28 vaccinating teams will be available who will work from 0800 to 1800 hours every Saturday and Sunday in parks, promenades, town squares and smaller squares, emergency stations and neighborhoods under the direct supervision of professionals from the Pasteur Institute. The vaccines were produced in the biology laboratory of the Pasteur Institute. During the last 2 years a noticeable decrease in the number of rabies cases has been achieved. According to reports the 225 rabid dogs of 1976 dropped to only 58 cases last year and to 23 so far this year. The vaccinations will be free and each owner of an animal will receive a certificate with which he will be able to obtain the appropriate license which is granted by the Pasteur Institute. Before each week-end the locations where vaccinations will be given will be announced. [Text] [Buenos Aires LA PRENSA in Spanish 5 Oct 78 p 9] 9204

RABIES SITUATION--The persistent presence of rabies and the consequent need to eradicate it must lead to a concerted municipal effort in greater Buenos Aires. Within this urban area a strategy must be carried out to reduce the number of victims of bites by stray dogs carrying the rabies virus. To this end the program undertaken by the Welfare Secretariat of Quilmes suggests a means of lowering the figures. Free home service by teams which have taken courses in health education is accompanied by illustrative pamphlets which alert the neighborhood to the work which is effectively being carried out. Once more it will be beneficial to override the arbitrary jurisdictional boundaries to ward off a disease which concerns everyone who lives in the Buenos Aires area. [Text] [Buenos Aires LA NACION in Spanish 3 Oct 78 p 8] 9204

DOG SALES--Municipal ordinance No 20333 which prohibits the sale of pups and requires the closing of clandestine breeding places--as well as Articles 42, 43 and 44 of Law No 8056/73 of the Province of Buenos Aires, on the prevention of rabies--provides adequate legislation for eliminating the sorry spectacle of the street sale of dogs. These antirabies provisions constitute a means of preventing the spread of this terrible disease which has so many human victims due to the negligence and irresponsibility of such dealers in exposing the population. Now that we are entering the most dangerous season the law must be strictly enforced. We have adequate laws for it and lack of compliance is inexcusable. [Text] [Buenos Aires LA NACION in Spanish 8 Oct 78 p 8] 9204

KENYA

BRIEFS

FOOT-AND-MOUTH CONTROL MEASURES--The Kajiado District livestock officer, Mr. J. Mkenya, has announced that due to an outbreak of foot and mouth disease in Olyankalani, Sajiloni and Kaloriti areas, all livestock sales and movement into and out of the District have been banned October 17. He warned that anybody found moving livestock without a written permit from the veterinary department will be prosecuted--KNA [Text] [Nairobi DAILY NATION in English 20 Oct 78 p 3]

CSO: 5400

## MOZAMBIQUE

### DETAILS GIVEN ON FOOT-AND-MOUTH DISEASE PROPAGATION

Maputo NOTICIAS in Portuguese 11 Oct 78 p 2

[Excerpt] With the gradual opening of the cattle-raising areas of Manhica, Chokwe, Magude and Moamba begun a few days ago, the flow of cattle for slaughter in the abattoirs will be restored by the end of the current month, after nearly a year of interdiction because of the increased sources of foot-and-mouth disease registered in the provinces of Gaza and Maputo. This epizootic (disease that attacks many animals at the same time) outbreak caused considerable damage to the country's economy, and worsened the already deficient supply of beef in the two provinces, particularly in Maputo, a problem which is being minimally solved by the importation of frozen meat. Initially detected in Magude, the foot-and-mouth disease rapidly spread to the cattle-raising areas of Xinavane, Manhica, Limpopo, Chibuto and Moamba. This brought about the banning of the flow of cattle to the slaughterhouses and of dairy production itself, while strong sanitary measures were adopted for the massive vaccination of cattle, the establishment of disinfection units for the spraying of vehicles at all access points and the isolation of the affected areas.

At present, the ban has been already lifted throughout the district of Manhica and the locality of Chokwe, in the district of Limpopo, as well as in a large portion of Moamba, and it is foreseen that by the end of the current month, it will be possible also to allow the flow of cattle from a portion of the district of Magude, the biggest supplier of beef to the city of Maputo: close to 500 head of cattle monthly. The only district that will remain closed to the movement of cattle to the slaughterhouses until next year is Chibuto, in Gaza Province.

#### Origin of the Disease

The first source of foot-and-mouth disease--an illness that attacks only cattle, hogs and goats--was detected in October 1977 in the border region of Mapulanguene, in Magude, in a belt where this disease is considered cyclical located on the northern extremity of this district. Studies made by the livestock sanitary services of our country led to the conclusion that this outbreak originated in the South African game preserve known as Kruger Park,

which borders on Magude, where a strong wave of foot-and-mouth disease recently spread unchecked through the impala herds. Its spread to our territory occurred through the incursion of some of those infected animals, and also by means of water contaminated with the virus of that disease which our cattle eventually drank from streams arising there and flowing into Mozambique. Sanitary measures were immediately adopted for the vaccination of the afflicted animals, at the same time that the movement of cattle in and out of the affected area was banned and disinfection units were set up to spray vehicles at all the access points. In the meantime, the high degree of propagation of this disease resulted in many other cattle-raising areas in the district of Magude being affected, which brought about an expansion of the vaccination and disinfection campaign to a whole belt stretching from the south of Gaza Province to the portion that borders on Maputo Province.

#### Its Propagation

Meanwhile, and with the situation in Magude practically under control, a new source was detected 2 months later in Chokwe, Gaza Province, which, after afflicting more than 200 cattle, was successfully combated and isolated from the rest of the cattle-raising regions.

Inasmuch as such epizootic outbreaks had been unforeseen, the job done in Magude and Chokwe exhausted all the vaccine supplies--which are wholly imported--that it had been possible to obtain under such an emergency, and efforts were then made to acquire more. Another source was to be detected in March 1978 near Chuali Lagoon, in the locality of Xinavane, which afflicted 5,000 head of cattle. Nonetheless, it was only on 15 March, after the arrival of the vaccine, that it was possible to carry out vaccinations in this area, a delay which resulted in the spread of the disease to Palmeira and subsequently to the district seat itself, Manhica. In the province of Maputo, too, another source was detected in the district of Moamba which afflicted a little more than 100 head of cattle in an area that had been considered difficult for it to reach. This source was combated and completely isolated following its discovery.

The outbreak of foot-and-mouth disease spread, however, to the area of Muhape, in the district of Chibuto, in mid-May of this year. In order to combat the disease, sanitary measures were also adopted for the massive vaccination of cattle, and the prohibition of automotive traffic as well as of the movement of animals, goods and feed in the infected areas.

#### Sanitary Measures

To stop the advance of this epizootic disease, vaccinations were carried out in all the districts of Magude, Manhica and a large portion of Marracuene, as well as in the section of the Macia District that abuts on Xinavane. In the district of Maputo, all dairy-cattle farms, whether state- or privately-owned, were also included in the vaccination for the purpose of ensuring the supply of milk for the city and the immunity of all kinds of choice breeds, particularly the calves, whose mortality rate as a result of foot-and-mouth disease is much higher.

It is noted that although it does not present any danger of infection to human beings, foot-and-mouth disease causes a loss of weight and even the death of the animals and a decrease in the milk production of thousands of cows.

The activities of combating foot-and-mouth disease constitute a heavy burden for the national economy because, in addition to the cost of the vaccine (each dose is priced at 40 escudos), one has to consider the disinfectants used in sprayings and the mobilization and concentration of resources in terms of technicians, vehicles, fuel and other things. Precisely to prevent an outbreak of this disease reaching such proportions in the future, a committee was established which is studying a new protection plan capable of ensuring greater efficiency, to be used in the process of routine vaccination being carried out annually in Magude along the border with South Africa.

The livestock sanitation services, however, in conjunction with the National Highway Administration, will proceed to set up disinfection units in Palmeira, Xinavane and Marracuene to back up those already in place.

8414

CSO: 5400

## TICK DISEASE SEEN AS BIG THREAT TO CATTLE

Salisbury THE HERALD in English 3 Nov 78 p 12

/Article by Phillippe Berlyn/

/Text/

WHILE there is general concern throughout the country about the increase in stock theft and mutilation of cattle on farms, another, equally deadly attack against cattle is taking place in the tribal areas. This attack, if unhalted, is likely to lead to a loss of over 50 percent of the cattle owned by tribesmen.

In the forefront of the attack are *boophilus decoloratus*, the blue tick, and the three-host tick, *hippocampus appendiculatus*, the brown ear tick. These small but lethal invaders which carry diseases fatal to cattle, are in the throes of a population explosion, which is a direct result of the political and military situation in our country today.

The tick is a ubiquitous insect. There are roughly 800 different species, ranging from the Arctic Circle and Siberia to tropical Africa.

The tick that lives in the frozen climates is to be found on penguins. The Siberian tick is the vector of killer disease among humans. It may or may not be significant that since the Russians discovered oil in Siberia, they are deeply involved in research into the tick life cycle and into tick-borne disease.

## GALL SICKNESS

In Rhodesia it is the cattle which are affected by tick-borne diseases; gall sickness, redwater, heartwater, sweating sickness and theileriosis. These diseases can be virtually eradicated by the constant and regular dipping of cattle to prevent tick infestation. Since the early 1920s dipping has been compulsory, and for the past 50 years the health of the tribal cattle has been good.

Tick infestation was reduced to a minimum. Disease was comparatively rare, because without the tick to act as vector, there were few outbreaks, and those that there were were easily contained.

Because there was so little disease, tribal cattle built up in numbers to a level which was, in some areas, beyond the carrying capacity of the land. Most of the tick species found in our country cannot exist in harsh ecological conditions, and where overstocking occurred in the tribal areas, with resultant thinning out of grass cover and, in extreme cases, bare eroded

land, these species did not occur.

Today the situation has altered dramatically.

With the lapse of 50 years, the tribesmen began to forget what disease could do to their herds. They also began to look upon dipping as a chore and an expensive chore at that. Although purchase of dip chemicals is heavily subsidised, the tribesmen pay a dip fee.

It was not surprising, then, that when they were told by terrorists to stop dipping their animals, they agreed very willingly. During the first wet season after dipping had stopped, there was little evidence to suggest that to do so had been a mistake. A few cattle showed signs of disease; but there was nothing out of the ordinary.

The reason for this was that tick control had been so efficient in the past that the tick-population in tribal areas was small. It also takes a period of time after the disease has been transmitted before it manifests itself.

## DIPPING

This situation did not last. One blue tick lays 5 000 eggs. The brown eared tick lays 20 000. The first cattle deaths in large numbers were reported during the wet season of 1974, between 12 and 18 months after dipping had ceased. Because the tribal herds had been kept so free from disease, they were highly vulnerable, and they died in frighteningly high numbers. In some areas the death rate was as high as 50 percent.

Nor was this the end of the story.

In those areas which had been overstocked and become heavily eroded, the grass cover now began to improve, and it became possible for other species of ticks to move in to territory which had previously been infested only by the blue tick. They brought with them new varieties of disease which had not occurred before in the tribal areas. Again the tribal cattle sickened and died.

About 3 200 000 cattle are owned by the tribal people. Of this number 300 000 have already died as a result of tick-borne disease. Half the dips in the tribal areas are not operating. Others have been filled in, damaged, or destroyed.

Authorities predict that the death toll from tick-borne disease will rise steeply at the end of this year as areas in the south-east and south-west begin to show the effects of the more recently caused cessation of dipping. These are areas where the population is heavily dependent on cattle for its income. There have already been reports of entire communities being in financial difficulties.

Even if dipping could be introduced immediately, it will still take time to eradicate the large tick populations that have built up. And if dipping is not introduced immediately, the statistics already available indicate that deaths amongst tribal cattle in affected areas will reach, and exceed, 50 percent.

In the opinion of experts, it will take 10 years to undo the damage.

CSO: 5400



## URGENT STEPS TAKEN TO HALT SNAIL INFESTATION

Salisbury THE HERALD in English 2 Nov 78 p 11

[Text/

SALISBURY City Council has taken urgent steps to control snail infestation on its farms and an outbreak of liver fluke which has affected virtually all the cattle on the farms.

Investigations into the problem were carried out and at an informal meeting of councillors, Blair Research Laboratory staff, interested veterinarians and Salisbury municipal employees, it was agreed that control measures be prepared by the laboratory and implemented as a matter of urgency. Members of the laboratory described the matter as being serious.

A major factor which has tended to encourage the incidence of snails on the council farms is the intensive nature of the farm operations coupled with the continual irrigation of the farms.

The farms were mainly

used for crops in the past, but they are now geared towards the irrigation of effluent on pastures and cattle breeding on an increasing scale. While the farm dams are relatively free of snails, large numbers have been found in the irrigation canals and the wet areas of the pastures.

"We have a lot of bird life — ducks, egrets, etc. — and these birds are the main carriers of snails," a municipal official said.

Municipal officials feel confident that control measures which have been introduced in conjunction with the Blair Research Laboratory, killing snails with molluscides and dosing cattle against liver fluke, will be successful.

The snail is an essential part of the life-cycle of the liver fluke parasite. When cattle feed on the irrigated pastures they sometimes pick up the immature forms of the liver fluke parasite which

emerge from the snails.

Although the disease was serious, one council official said, cattle were rarely lost through liver fluke.

"The elimination of snails, plus the dosing of cattle, should greatly reduce the incidence of liver fluke in the cattle," he said. "We will be carrying out periodic surveys on the snails and on the incidence of liver fluke, and treatment will be carried out when it is thought necessary."

"We are confident that we will reduce the problem and hope that we will be able to keep it at bay," he added.

It is considered that the control of snails would require treatment every six months and that for liver fluke every three months. The cost of such control measures could be up to \$9 000 a year but municipal officials hope that the actual cost will not be as high as that.

CSO: 5400

## SOUTH AFRICA

### BRIEFS

FOOT-AND-MOUTH THREAT--Pietersburg--Diseased Rhodesian cattle are posing a serious threat to farmers in the Messina and Soutpansberg areas. The State veterinarian for the Soutpansberg region, Dr G.K. Brückner, said in Louis Trichardt that the military situation in Rhodesia has made regular inspections there impossible. It is feared that large parts of the trust areas in the southern regions of Rhodesia are infected with foot and mouth disease. The chairman of the Soutpansberg District Agricultural Society, Mr C.E. Terblanche, himself a cattle farmer in the threatened area, has warned farmers about the dangers of illegal smuggling of livestock from Rhodesia. The police, Government departments and the Agricultural Society are working together closely to combat the disease threat. Cattle movements in the border area are being carefully watched, and all livestock auctions are prohibited. [Text] [Johannesburg THE STAR in English 21 Oct 78 p 2]

CSO: 5400

VIETNAM

# LONG AN ACTS TO PROTECT ITS ANIMALS DURING FLOOD SEASON

Hanoi NHAN DAN in Vietnamese 2 Oct 78 p 1

[Article: "Long An: Prevention and Control of Epidemics Among Domestic Animals During Flood Season"]

[Text] Taking its own initiative in preventing and controlling animal infectious diseases during the flood season, the veterinary sector in Long An Province has begun a phase of preventive inoculation for cattle and hogs. In the second half of September, more than 75 percent of the hogs of Ben Thu, Duc Hoa and Can Duoc Districts were vaccinated against cholera, diarrhea and pasteurellosis. The veterinary station in the province sent a group of cadres carrying 10,000 doses of vaccines and medical instruments and means to the areas seriously affected by flood in Moc Hoa and Vinh Hung Districts to examine and vaccinate the herds of cattle totalling more than 6,000 heads against the foot and mouth disease.

Almost all villages have veterinary cadres and medicines available. Thanks to the establishment of a good veterinary network, Long An Province recently was able to stop an epidemic among the hogs of Moc Hoa and Ben Thu Districts and the City of Tan An.

5598

CSO: 5400

DESTRUCTION WROUGHT BY INSECTS, RODENTS

Bamako L'ESSOR in French 17, 18 Aug 78

[Article by Abdoulaye Sidibe, of Rural Activation, Radio Mali: "Those Insects and Birds Who Starve Us"]

[17 Aug 78, p 6]

[Excerpts] Five hundred million tons of cereals, 34 billion dollars: this is what humanity loses each year to birds, insects and rodents. At this time, when the problem of hunger worries the world and a part of humanity is affected by drought, the struggle against depredators takes on special importance. Thus one understands the great activity regarding these problems, especially in our region. First of all, there are the boards of directors of OCLALAV [Joint Anti-Locust and Anti-Aviarian Organization] and the OICMA [International African Migratory Locust Organization] in Kinshasa and Lome, where we have been represented by our Minister for Rural Development, Fagnanama Kone. Secondly, in the face of the invasion of locusts which at this moment is looming from the Horn of Africa, the FAO (UN Food and Agricultural Organization) called in Rome, from 26 to 28 July 1978, an extraordinary meeting of the FAO committee on combating the migratory locust.

All crops, during their growth and until harvest, are subject to certain harmful influences which cause more or less sizeable losses.

And in all parts of the world, effective protection of plants is today an indispensable condition for agricultural production of satisfactory quality as well as quantity.

For at least 200 years, the question of the effective volume of the damage caused by the various harvest depredators (insects, birds, rodents) has been posed. But the techniques of evaluation in this regard are still not perfected. In October 1967, the FAO held a symposium which summed up the results achieved in this area up to that time, and set forth recommendations for further research. One report in particular, that by the German researcher Cramer, commanded the symposium's attention.

Cramer estimated the total losses of cereals which humanity suffers from these depredators at 500 million tons or 34 billion dollars. This represents 35 percent of the potential world harvest of cereals. This 500 million tons of loss includes more than 200 million tons of rice.

Such figures make one stop and think--especially in the Sahel, where one finds oneself wishing: "Oh, if there only were no more rats or parasites."

A fact of special interest is that Africa is one of the zones of the world which suffer relatively the greatest losses of cereals because of parasites.

Cramer's study gives the following table:

- Europe, 5 percent
- Oceania, 7 percent
- North and Central America, 9 percent
- Latin America, USSR and continental China, 10 percent
- Africa, 13 percent
- Asia (except China and Soviet Asia), 21 percent

This study shows us that measures to protect plants are more urgently needed in Asia and Africa than anywhere else.

Sahel: Drought and Grasshoppers

The states of the CILSS [Inter-State Committee to Fight the Drought in the Sahel] are more than anything else concerned with protection of plants. Already victims of drought, they must protect the little which they produce from the harmful action of birds and insects, especially when a serious invasion of insects has followed the drought.

It has been observed that the locust situation in the Horn of Africa is presently very critical. All the conditions have come together to engender a new scourge, capable of extending to other regions. If a population of locusts is not destroyed in its beginnings, upon detection, it needs only a very short time, under favorable circumstances, to develop into a swarm, as was the case in 1968 and 1969 and as is the case at present, since the DCLO-EA [Desert Locust Control Organization for Eastern Africa] has signalled the presence of 33 swarms in Ethiopia and 17 swarms in Somalia, covering a total surface area of 2,000 km<sup>2</sup> [square kilometers]. For the first time since the last invasion, some of these swarms exceed 100 km<sup>2</sup> each. If not combatted effectively, these swarms will reproduce in Ethiopia, Somalia and Sudan between July and September, and the offspring will invade Kenya and other countries to the east and the west of the multiplication zone. This would be the beginning of a new invasion gradually extending to the other regions.

[18 Aug 78, p 6]

[Excerpts] Mali seems far from these infested regions; nevertheless, it is still necessary for us to overhaul our means of combat, for the locusts can get to us by two possible routes:

(1) leaving the Horn of Africa, they could pass through Kenya, Chad, Niger, etc.;

(2) the second route passes through Algeria, Mauritania, etc.

Effective struggle against these depredators is a vital necessity for us, for Mali too, like other countries, suffers enormous losses. According to Mr Sissoko, director of the Seed and Harvests Protection Operation, evaluation of the losses due to these harvest depredators is not easy. The losses vary with the different harvests and the species of ravager.

According to Sissoko, during the 1974-75 season alone, Mali lost some 100,000 tons of food crops just to grasshoppers. This represented nearly 3 billion Malian francs. As for stored cereals in the same period, the losses caused by the ravagers are considered even bigger. Some recent studies, done in 1977, have shown that in the farmers' granaries, the losses of millet and sorghum, by weight, vary from 2.3 percent to 43.5 percent, for storage of 5 to 7 months. These figures, applied to a small stock of 1,000 tons of millet, mean losses of 23 to 435 tons, with a monetary value between 2.3 million and 24.5 million Malian francs. By way of comparison, we note that Mali's cereal deficit due to the drought is estimated by the CIPSS [expansion unknown] at 171,000 tons.

Thus, protection of harvested products is just as important as the measures to protect plants before harvesting; from the economic point of view, it can even be more important, for the value of products harvested and stored is increased by the costs caused by harvesting, transport and storage. The best method of struggle is the prophylactic method--that is, the method consisting in preventing invasion by insects and rodents. All of the prophylactic methods are more economical than destruction by chemical products, because the bodies of the insects do not remain in the merchandise.

11267

CSO: 5400

## JAMAICA

### BRIEFS

SUGAR CANE RUST GROWING--The growing incidences of the newly discovered sugar cane rust is causing much concern in the sugar industry. Reports say that the disease has now been found in most of the principal sugar growing areas and might now be threatening the anti-smut replanting programme. The threat arises from the fact that the main smut resistance variety is now found highly susceptible to sugar cane rust. The reports said that the distribution of the rust disease suggest that the introduction did not occur in a small area, but all over, suggesting the possibility that it arrived here in air currents, possibly from West Africa. Sugar cane rust affects primarily young canes, and can be so severe as to cause an appreciable setback in development with consequent later effects on yield. Severely affected fields lose their usual green colour and appear distinctly brown. However, as the plants get older, the disease might either disappear or become much less marked, though the infection could continue to be spread from such plants. Meanwhile, a report said that losses from the sugar cane smut might not be as severe as was at first feared. Yields from fields affected by the disease have led to the guarded conclusion that the production reduction consequent on the outbreak could be less than was forecast. The anti-smut campaign, being pursued in collaboration with the United States and Cuba has also resulted in the possibility that several promising new varieties might be introduced into the island's sugar industry. [Text] [Kingston THE DAILY GLEANER in English 2 Nov 78 p 1 FL]

CSO: 5400

SPITTLE-BAG INSECTS, FUNGUS DAMAGE CROPS IN GONGOLA STATE

Kaduna NEW NIGERIAN in English 19 Oct 78 p 24

/Article by Ibrahim N. Salihu/

/Text/

**PESTS known as spittle-bag and fungus have invaded some farms in Gongola State.**

**The pests were sighted in various farms in Mubi and Minchika Local Government areas of the state.**

As a result crops in the affected farms have been wilting. The spittle-bag insects have done a lot of damage to crops while the fungus destroyed guinea-corn farms.

In Mubi Local Government area, 200 acres of farmland were affected.

Explaining the findings of a team of experts drafted to the two areas for a massive operation to contain the situation, the state's Chief Agricultural Officer, Mr. Babale Maikidi, said that the fungus infection was "an isolated case."

Though he stated that about 240 litres of insecticide were sent to the two areas in addition to what was then available there, the farmers were disturbed about the sighting of the pests.

Mr. Babale Maikidi who was

speaking to the New Nigerian in an interview stated that the chemicals were applied with the aid of 30 sprayers from the ministry. The farmers were not required or requested to pay for the services rendered, he said.

He indicated in the case of Mubi, where about 200 acres were affected, late planting and the diseases would have a bad effect on the yields. There would be less harm to crops in Michika area, he said.

The chief agricultural officer's advice to farmers in those two affected areas was that they should start to practise rotational or shifting farming so as to kill and discourage any spread of pests.

He revealed that arrangements were already under way to purchase large quantities of seed dressing chemicals which would be made available to farmers much earlier before the next planting season. The step, he said, would equip the farmers so that they could at least make an attempt to deal with any outbreak of pests in their farms before the authorities received their "danger signal," he added.



## POLAND

### BRIEFS

POTATO DISEASES REPORTED--This year there is a considerable backlog of field work. The yields, in view of the relatively poor, sandy soils are passable. Of the nine varieties of potatoes grown here [in Lidzbark Welski in Ciechanow Voivodship--potato fields here occupy 573 hectares]--Narew, Notec, Grata, Grand Folia, Uran, Lenino, Merkury, Sokol, and Alka--the first two, Notec and Narew, had the best yields under this unfavorable weather. The Uran and Lenino varieties, normally the basic local varieties, fell short of expectations--they succumbed to diseases: virus black stem ("wirusowa czarna nozka") [aka: "zgorzel podstawowy lodyg (czarna nozka) ziemniaka"] and fungal potato disease ("grzybowa zaraza ziemniaczana") [potato blight]. The rainfall in September [1978] caused many of the potatoes not to store well and they have been sent as quickly as possible for industrial processing. Many of the potato [storage] mounds which had already been prepared had to be taken apart because of the occurrence of rotting. Much loss was avoided as a result of the automatic measurement of the temperature in the mounds. The large number of varieties of potatoes grown here is due to the necessity of such a distribution of ripening time so that they can all be gathered in time. The varieties are also a guarantee against surprises; when one variety fails, others give good yields. [Excerpts] [Warsaw ZYCIE WARSZAWY in Polish 19 Oct 78 pp 1, 2]

CSO: 2600

SUDAN

BRIEFS

LOCUST THREAT--An official plant conservation source has informed the Sudan News Agency (SUNA) that Sudan faces the probability of an onslaught by 54 swarms of desert locusts from Ethiopia and Somalia this winter. The source indicated that the Tawkar region will be one of the regions which will be subjected to the main attack beginning in the month of November and lasting until the end of next March. He said that the amount of danger posed to the Sudan by these swarms this year is estimated to be more than 20 times the potential [danger] which existed last year. Likewise, the source announced that Sudan is currently carrying out a number of large campaigns to face the situation. A large number of planes and land machines are taking part in this struggle. They were assembled from Port Sudan, to begin confrontation operations next month in concordance with the Desert Locust Control Organization of East Africa (DELCOEA) and the Near East Organization to Combat Desert Locusts. [Text] [Khartoum AL-SAHFAH in Arabic 14 Oct 78 p 1]

ANTINOVS TO FIGHT PESTS--Kusti, Oct 15, (SUNA)--Antinovs equipped with spray systems are used to fight birds in farming areas round here with West German experts participating. Reports of desert Locust north and west of here had prompted Plant Protection officials to distribute insecticides for farmers. Plant Protection teams are currently surveying the eastern and western banks for Locust before spraying activities. [Text] [Khartoum SUNA BULLETIN in English 15 Oct 78 p 4]

CSO: 5400

END